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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,102	06/25/2004	Shigeru Ishizawa	255130US3PCT	2770
22850	7590	04/09/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
MOORE, KARLA A				
ART UNIT		PAPER NUMBER		
1792				
NOTIFICATION DATE		DELIVERY MODE		
04/09/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/500,102

Applicant(s)

ISHIZAWA ET AL

Examiner

KARLA MOORE

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-13, 19 and 24-29 is/are pending in the application.
- 4a) Of the above claim(s) 28 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9, 11-13 and 19 is/are allowed.
- 6) ☒ Claim(s) 24-27 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 0208
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Newly submitted claim 28 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: see original restriction requirement.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 28 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 29 recites the limitation "the spaces". There is insufficient antecedent basis for this limitation in the claim. Examiner has assumed that Applicant meant to recite "the upper space or the lower space". Clarification and/or correction is requested.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,981,408 to Hughes et al. in view of Japanese Patent No. 6100164 to Kitsunai et al.

8. Hughes et al. disclose a transfer mechanism for transferring an object to be processed substantially as claimed and comprising: a common transfer chamber under a vacuum state (Figures 1-3 and 6-9, 30), wherein transfer ports (at interface between lift beam assembly, 60 in uppermost position and processing chambers, S_i; column 7, rows 23-30) are disposed in a longitudinal direction of the common transfer chamber; a

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guide rail (71) installed in the longitudinal direction of the common transfer chamber; a moving body (75) movable along the guide rail; an object holding member (multiple parts) including a holding part (81) for holding the object and a supporting part (43) for supporting the holding part; and mechanisms (62) for raising and lowering the object holding member wherein the raising and lowering mechanisms are installed apart from each other at positions corresponding to the transfer ports.

9. However, Hughes et al. fail to teach the common transfer chamber is divided into an upper space and a lower space by a partition wall which has a guide slit allowing horizontal movement of the supporting part.

10. Kitsunai et al. teach providing a partition between object carrying and driving portions of a transfer mechanism in a vacuum atmosphere/chamber thereby dividing the vacuum chamber into an upper space and a lower space for the purpose of isolating them from one another and increasing magnetic bonding power (abstract).

11. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a partition between the object carrying and driving portions of the transfer mechanism in the vacuum atmosphere/chamber of Hughes et al. thereby dividing the vacuum chamber into an upper space and a lower space in order to isolate the upper space and lower space from one another and increase magnetic bonding power of the elevation supporting structure as taught by Kitsunai et al.

12. Claim 25-27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes and Kitsunai et al. as applied to claim 24 above, and further in view of U.S. Patent No. 5,417,537 to Miller.

13. Hughes et al. and Miller et al. disclose the invention substantially as claimed and as described above.

14. However, Hughes et al. and Kitsunai et al. fail to disclose many commonly known features of a transfer mechanism for disc-like objects/substrates.

15. Miller also discloses providing the following features in/associated with a transfer mechanism for the purpose of efficient transfer of objects in a sealed environment where particle generation is minimized (column 1, rows 62-65): a linear motor mechanism including armature coils installed in the longitudinal direction of a common transfer chamber, and a field magnet installed on the moving body; and a vacuum separation wall for airtightly separating the armature coils from the inside of the transfer chamber where the field magnet is installed. See Figures 1, 10 and 11. Also disclosed for efficient transfer are a magnetic levitation device for levitating the moving body from the guide rail (column 6, row 44 through column 7, row 4); and the transfer mechanism further includes a gas supplying mechanism to one of the upper space or lower space and a gas exhausting mechanism to the other of the upper or the lower space. See Figures 10 and 11.

16. It would have been obvious to one of ordinary skill in the art to have provided the transfer mechanism of Hughes et al. and Kitsunai et al. the commonly known features of

a transfer mechanism described above in order to provide for efficient transfer of objects in a sealed environment where particle generation is minimized as taught by Miller et al.

Allowable Subject Matter

17. Claims 1-9, 11-13 and 19 are allowed
18. The following is an examiner's statement of reasons for allowance: See previous office action.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KARLA MOORE whose telephone number is (571)272-1440. The examiner can normally be reached on Monday-Friday, 9:00 am-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571.272.1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Karla Moore/
Primary Examiner, Art Unit 1792
20 March 2008